

CHAPTER Env-Dw 500 OPERATION AND MAINTENANCE

PART Env-Dw 502 CERTIFICATION OF WATER WORKS OPERATORS

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# NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES

## PART Env-Dw 502 CERTIFICATION OF WATER WORKS OPERATORS

Statutory Authority: RSA 332-E:3

### REVISION NOTE:

Document #9410, effective 3-12-09, readopted with amendments and renumbered former Part Env-Ws 367, entitled Certification of Water Works Operators, under a new subtitle as Part Env-Dw 502. The redesignation from subtitle Env-Ws to subtitle Env-Dw was done pursuant to a rules reorganization plan for Department rules approved by the Director of the Office of Legislative Services on 9-7-05. Numbers of former rules under subtitle Env-Ws are cited in the source notes.

Document #9410 replaces all prior filings for rules formerly in Env-Ws 367. The prior filings for rules in former Env-Ws 367 include the following documents:

#4850, eff 6-25-90  
#5422, eff 6-22-92  
#5873, eff 7-26-94  
#6521, eff 6-4-97  
#7396, eff 11-1-00  
#9297, INTERIM, eff 11-1-08

Env-Dw 502.01 Purpose. The purpose of these rules is to implement RSA 332-E, relative to the certification of operators of public water system treatment plants and distribution systems, in order to:

(a) Assure that operators of water treatment plants and distribution systems are qualified by having the expertise to properly operate and maintain such facilities; and

(b) Protect public health.

Source. (See Revision Note at part heading for Env-Dw 502)  
#9410, eff 3-12-09 (formerly Env-Ws 367.01)

Env-Dw 502.02 Applicability. These rules shall apply to:

(a) All community water systems (CWS);

(b) All non-transient, non-community water systems (NTNC);

(c) Beginning July 1, 2009, all privately owned redistribution systems (PORS); and

(d) Any individual who wishes to operate a CWS or NTNC or who wishes to operate a PORS on or after July 1, 2009.

Source. (See Revision Note at part heading for Env-Dw 502)  
#9410, eff 3-12-09 (formerly Env-Ws 367.02)

Env-Dw 502.03 Definitions.

(a) “Advisory committee” means “advisory committee” as defined in RSA 332-E:1, I, namely “the 5 member committee established in RSA 332-E:2.”

(b) “Certificate” means “certificate” as defined in RSA 332-E:1, II, namely “a certificate of competency issued by the department stating that the operator has met the particular requirements set by the department for certification at [the operator’s] level of operation.”

(c) “Clarification” means a process for the hydraulic removal of particles from water.

(d) “Community water system (CWS)” means “community water system” as defined in RSA 485:1-a, I, namely “a public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.”

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- (e) “Complete treatment” means a combination of unit treatment processes including, but not limited to, disinfection, flocculation, sedimentation, and filtration.
- (f) “Continuing Education Unit (CEU)” means 10 contact hours of participation in an organized continuing education experience under responsible sponsorship, capable direction, and qualified instruction.
- (g) “Department” means “department” as defined in RSA 332-E:1, III.
- (h) “Disinfection” means a process which inactivates pathogenic organisms in water using chemical oxidants or equivalent agents, as regulated under Env-Ws 380 or successor rules in subtitle Env-Dw.
- (i) “Filtration” means a process for removing particulate matter from water by passage through porous media, as regulated under Env-Ws 380 or successor rules in subtitle Env-Dw.
- (j) “Fire protection” means one or more fire hydrants installed on a water system’s water distribution system, designed to be capable of supplying a sufficient quantity of water with adequate pressure to be used for fire fighting purposes.
- (k) “Flocculation” means a process to enhance agglomeration or collection of smaller floc particles into larger, more easily settleable particles through gentle stirring by hydraulic or mechanical means, as regulated under Env-Ws 380 or successor rules in subtitle Env-Dw.
- (l) “Groundwater under the direct influence of surface water” means “groundwater under the direct influence of surface water” as defined in 40 CFR 141.2, namely “any water beneath the surface of the ground with significant occurrence of insects or other microorganisms, algae, or large-diameter pathogens such as giardia lamblia or cryptosporidium, or significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH, which closely correlate to climatological or surface water conditions.”
- (m) “Non-transient, non-community water system (NTNC)” means “non-transient non-community water system” as defined in RSA 485:1-a, XI, namely “a system which is not a community water system and which serves the same 25 people, or more, over 6 months per year.”
- (n) “Operator” means “operator” as defined in RSA 332-E:1, IV, namely “the individual who has full responsibility for the operation of a water treatment plant or water distribution system and any individual who normally has charge of an operating shift, or who performs important operating functions including analytical control.”
- (o) “Operator experience” means the time an operator has been actively engaged in the satisfactory performance of his or her duties at a CWS or NTNC.
- (p) “Operator-in-training (OIT)” means an applicant who has satisfactorily met the education and examination requirements for the grade for which the applicant has applied but who has not had sufficient experience to meet the full requirements for that grade.
- (q) “Population served” means the determination of population for the classification of a water distribution system by using an equivalent of 100 gallons per capita per day.
- (r) “Primary water system operator” means an individual certified at a treatment or distribution grade equal to or greater than the classification of the water system, who has been designated by the owner of the water system as responsible for the operation of the water system in accordance with Env-Dw 502.21(a)(2).
- (s) “Privately owned redistribution system (PORS)” means “privately owned redistribution system” as defined in RSA 485:1-a, XIV-a.
- (t) “Public water system” means “public water system” as defined in RSA 485:I-a, XV.
- (u) “Responsible charge experience” means the time an operator is actively engaged in supervising the operation of a water treatment plant or water distribution system.

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(v) “Sedimentation” means a process in which solid particles settle out of water in a clarifier or sedimentation basin.

(w) “Source” means the source of water for a CWS or NTNC, including wells, springs, and surface waters such as lakes and streams.

(x) “Water distribution system” or “distribution system” means “water distribution system” as defined in RSA 332-E:1, V, namely “that portion of the public water system which includes pipes, storage facilities, pressure booster facilities, and all measuring and control devices used to convey potable water to the system users.”

(y) “Water treatment plant” or “treatment plant” means “water treatment plant” as defined in RSA 332-E:1, VI, namely “the portion of the public water supply system which in some way alters the physical, chemical, or bacteriological quality of the water being treated.”

Source. (See Revision Note at part heading for Env-Dw 502)  
#9410, eff 3-12-09 (formerly Env-Ws 367.03)

### Env-Dw 502.04 Application for Operator Certification.

(a) An applicant for operator certification shall file an application with the department as specified in RSA 332-E:4, I, together with the fee specified in RSA 332-E:4, III.

(b) As part of the application, the applicant shall provide documentation demonstrating that the applicant meets the qualifications specified in Env-Dw 502.18.

(c) The department shall process the application as specified in RSA 332-E:4, II.

(d) The application fee shall not be returned should the applicant fail to pass the examination.

Source. (See Revision Note at part heading for Env-Dw 502)  
#9410, eff 3-12-09 (formerly Env-Ws 367.04)

### Env-Dw 502.05 Examinations.

(a) The department shall administer written examinations to determine the knowledge, ability and judgment of the applicants for operator certification as specified by RSA 332-E:5.

(b) If an applicant has successfully passed, in another jurisdiction, the examination that is administered by the department, the department shall accept the results of that examination in lieu of requiring the applicant to take the examination again in New Hampshire.

(c) No applicant shall be certified who does not successfully pass the examination, except that certificates of proper classification shall be issued without examination as specified in RSA 332-E:6, VI and RSA 332-E:7.

(d) An applicant who does not pass and who wishes to retake the examination shall submit a new application as specified in Env-Dw 502.04, including the fee as required by RSA 332-E:5, IV.

Source. (See Revision Note at part heading for Env-Dw 502)  
#9410, eff 3-12-09 (formerly Env-Ws 367.05)

### Env-Dw 502.06 Issuance of Certificates.

(a) As specified in RSA 332-E:6, I, upon satisfactory fulfillment by an applicant of the requirements specified in RSA 332-E and Env-Dw 502, the department shall issue to the applicant a certificate designating the applicant’s competency, which identifies the class of treatment plant or distribution system and level of operation for which the operator is qualified.

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(b) As required by RSA 332-E:6, I, the certificate shall be prominently displayed in the office of the public water supply system.

(c) As specified in RSA 332-E:4, V, and subject to RSA 332-E:6, IV, a certificate shall be effective for 2 years beginning January 1.

Source. (See Revision Note at part heading for Env-Dw 502)  
#9410, eff 3-12-09 (formerly Env-Ws 367.06)

### Env-Dw 502.07 Renewal of Certificates.

(a) As specified in RSA 332-E:6, II and III, certificates shall be renewable every 2 years unless revoked for cause pursuant to Env-Dw 502.09, replaced by one of a higher grade, or invalidated pursuant to RSA 332-E:6, IV.

(b) An operator who wishes to renew his or her certification shall submit to the department:

(1) The fee specified in (c), below; and

(2) Documents verifying completion of the courses required by Env-Dw 502.08.

(c) The renewal fee shall be \$50 if the payment is made before expiration of the certification or within 30 days after expiration. As specified in RSA 332-E:4, VI, if the renewal fee is received more than 30 days after the certificate's expiration date, the department shall charge a late fee of 50 percent of the renewal fee in addition to the renewal fee.

(d) As specified in RSA 332-E:4, V, if the renewal fee is not submitted within 90 days after the certificate's expiration date, the certificate shall be deemed expired.

(e) The department shall issue a renewal certificate if it determines that the operator has applied for renewal as required by (b), above, and:

(1) No ground(s) for refusing to renew the certification, as specified in Env-Dw 502.09, are known to the department to exist for that operator; or

(2) Ground(s) for refusing to renew the certification exist, but reasonable conditions can be imposed to protect public health and safety and allow the operator to continue to work.

(f) If the department renews a certificate under (e)(2), above, it shall include conditions, such as additional training, increased supervision, or increased reporting, as are necessary to protect public health and safety.

(g) If the operator fails to apply for renewal within 3 months of the certificate expiration date, the operator shall apply for certification as specified in Env-Dw 502.04 and Env-Dw 502.05.

(h) As specified in RSA 332-E:6, V, the certificate of an operator who terminates employment in the water treatment or distribution field in New Hampshire shall be valid for 2 years after such termination and, unless renewed in accordance with these rules, shall automatically revert to an inactive status. Operators whose certificates are thus inactivated shall be issued new certificates of like classification on presentation of proof of competency to the department as specified in (i), below, and payment of the initial \$50 fee.

(i) Proof of competency shall be as follows:

(1) Documentation that the applicant was certified at the comparable classification in another jurisdiction, together with documentation that the applicant has completed the number of contact hours that would be required for renewal as specified in Env-Dw 502.08;

(2) Documentation that the applicant has been engaged in public water system management, operation, design, or maintenance activities at a level that demonstrates competence at the classification level sought by the applicant; or

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- (3) If the applicant cannot meet (1) or (2), above, successful completion of a written examination.

Source. (See Revision Note at part heading for Env-Dw 502)  
#9410, eff 3-12-09 (formerly Env-Ws 367.07)

### Env-Dw 502.08 Contact Hours Required for Certification Renewal.

- (a) An operator applying for renewal shall complete the number of contact hours of instruction related to public water system operation, design, or maintenance as specified in Table 502-1, below, for each 2-year period:

Table 502-1  
Required Contact Hours of Water Works Related Instruction

| Grade | Treatment (hours per 2-year period) | Distribution (hours per 2-year period) |
|-------|-------------------------------------|--|
| I-A   | 5                                   | 5                                      |
| I     | 20                                  | 20                                     |
| II    | 20                                  | 20                                     |
| III   | 20                                  | 20                                     |
| IV    | 20                                  | 20                                     |

- (b) The number of required hours shall not be additive when an operator is certified in both treatment and distribution. For example, a grade I operator certified for both treatment and distribution shall require only 20 hours of continuing education for the 2-year interval.

- (c) The following courses shall be approved and contact hours credited as follows:

- (1) One college credit in chemistry, mathematics, biology, engineering, or environmental science shall be equal to 15 contact hours;
- (2) An introductory or advanced course on drinking water treatment and distribution offered by the department or by an established organization that has as its primary mission the support and advancement of drinking water treatment and distribution, such as NH Water Works Association (NHWWA), American Water Works Association (AWWA), or New England Water Works Association (NEWWA), shall be equal to the number of hours in attendance;
- (3) The grade I-A course entitled "Small System Operation", consisting of approximately 10 contact hours of instruction offered by the department, shall be equal to the number of hours attended, with a maximum total credit being 10 contact hours per 2-year period;
- (4) The technical meetings of the NHWWA, AWWA, and NEWWA shall be equal to the number of hours attended with the maximum credit being 6 contact hours per technical meeting per day.

- (d) The operator may apply to the department for credit for other waterworks seminars and education courses by submitting a description of the course, material covered, institution offering the course, and instructor credentials to the department. Credit shall be given if the department determines the course to be comparable to a course offered by the department or the NHWWA, AWWA, or NEWWA.

- (e) The operator may apply for credit for completing self-study educational packets. The operator shall submit information or the actual texts describing the material covered, institution offering the course, and credentials of those providing critique of student work. Credit shall be given if the department determines the course was comparable to a course offered by the department or the NHWWA, AWWA, or NEWWA and was completed and understood by the operator.

Source. (See Revision Note at part heading for Env-Dw 502)  
#9410, eff 3-12-09

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### Env-Dw 502.09 Suspension, Revocation, or Refusal to Renew a Certificate.

(a) If the entity having revocation authority under RSA 332-E:9, hereinafter referred to as “the authority”, receives information which indicates that good cause, as defined in (f), below, exists to suspend or revoke the certificate, the authority shall proceed in accordance with RSA 332-E:9, the provisions of RSA 541-A applicable to adjudicative proceedings, and applicable rules.

(b) After proceeding in accordance with (a), above, the authority shall:

(1) Revoke the certificate if it determines that the reason that good cause exists cannot be corrected to conform to applicable requirements and revoking the certificate will provide greater protection to public health and safety than renewing the certificate; or

(2) Suspend the certificate, subject to (d), below, if it determines that the reason that good cause exists can be corrected to conform to applicable requirements.

(c) If a certificate is suspended pursuant to (b), above, the authority shall not reinstate the certificate until:

(1) The reason that good cause exists has been corrected to conform with applicable requirements; and

(2) The operator submits a written request to the authority requesting that the certificate be reinstated.

(d) If, after receiving a request for reinstatement of a certificate, the authority receives information which indicates that good cause, as defined in (f), below, exists to refuse to renew the certificate, the authority shall proceed in accordance with (a), above.

(e) After proceeding in accordance with (a) above, the authority shall:

(1) Refuse to reinstate the certificate, if it determines that good cause exists which cannot be corrected to comply to applicable requirements and not reinstating the certificate will provide greater protection to public health and safety than reinstating the certificate; or

(2) Reinstate the certificate, if it determines that under the totality of the circumstances, not reinstating the certificate will result in greater harm to public health and safety than reinstating the certificate.

(f) Good cause to suspend, revoke, or refuse to renew a certificate shall include the following:

(1) Failing to use care, judgment, and knowledge in the performance of the operator’s duties;

(2) Knowingly operating a water treatment plant or distribution system contrary to applicable requirements;

(3) Obtaining a certificate through fraud, deceit, or falsification;

(4) Submitting false or misleading information regarding any application for certification or renewal;

(5) Submitting false or misleading operational documentation relating to the performance and monitoring requirements of a public water system;

(6) Failing to submit required operational documentation to applicable regulatory agencies; and

(7) Having another professional or occupational certification or license from another certifying or licensing authority suspended, revoked, or refused renewal or reinstatement.

Source. (See Revision Note at part heading for Env-Dw 502)  
#9410, eff 3-12-09 (formerly Env-Ws 367.08)

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Env-Dw 502.10 Complexity of Water Treatment Processes. Treatment complexity shall be determined by a point system, wherein the points are assigned based on system size, source of water, raw water quality and average variation, chemical treatment processes, disinfection, pH adjustments, corrosion control, clarification, filtration, and other processes as listed in Table 502-2, below:

Table 502-2  
Assignment of Points for Treatment Processes

| ITEM  | POINTS  |
|---|---|
| A. System Size  |   |
| 1. Design flow average day, or peak month's average day, whichever is larger  | 1 per 0.5 million gallons per day (MGD), to a maximum of 20 |
| B. Water Supply Source  |   |
| 1. Seawater/Saltwater   | 0   |
| 2. Groundwater  | 0   |
| 3. Groundwater under the direct influence of surface water (GWI)  | 8   |
| 4. Surface water  | 10  |
| C. Average Raw Water Quality Variation  |   |
| 1. Little or no variation - no treatment provided except disinfection   | 0   |
| 2. Minor variation - e.g. high quality surface source appropriate for slow sand filtration  | 1   |
| 3. Moderate variation in chemical feed, dosage changes made monthly   | 2   |
| 4. Moderate variation in chemical feed, dosage changes made weekly  | 3   |
| 5. Moderate variation in chemical feed, dosage changes made daily   | 4   |
| 6. Variation significant enough to require pronounced or very frequent changes, or both   | 5   |
| 7. Severe variation - source subject to non-point discharges, agricultural or urban storm runoff, or flooding, or any combination thereof | 7   |
| 8. Raw water is subject to agricultural or municipal waste point source discharges, or both   | 8   |
| 9. Raw water is subject to industrial waste pollution   | 10  |
| D. Raw Water Quality  |   |
| 1. Taste or odor, or both, for which treatment process adjustments are routinely made   | 2   |
| 2. Color >15 color units (CU) not due to precipitated metals  | 3   |
| 3. Manganese less than maximum contaminant level (MCL) with iron greater than MCL   | 2   |
| 4. Manganese greater than MCL, regardless of iron content   | 3   |
| 5. Algal growths for which treatment process adjustments are routinely made   | 3   |
| E. Chemical Treatment or Addition Processes   |   |
| 1. Fluoridation   | 4   |
| F. Disinfection/Oxidation   |   |
| 1. Hypochlorites not generated on-site  | 5   |
| 2. Hypochlorites generated on-site  | 6   |
| 3. Chlorine gas   | 8   |
| 4. Chloramination   | 8   |
| 5. Chlorine dioxide   | 10  |
| 6. Ozonization  | 10  |
| 7. UV Irradiation   | 2   |
| 8. Iodine, Peroxide, or similar   | 5   |



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|  |                               |
|--|-------------------------------|
| 9. Potassium permanganate  |                               |
| a. Used without greensand filtration   | 4                             |
| b. Used with greensand filtration  | 0                             |
| G. pH Adjustment for Process Control to Aid Coagulation  | 4                             |
| H. Stability or Corrosion Control  |                               |
| 1. Same chemical(s) not used for pH adjustment   | 4                             |
| 2. Same chemical(s) used for pH adjustment   | 0                             |
| I. Coagulation/Flocculation & Filter Aid   |                               |
| 1. Primary coagulant addition  | 6                             |
| 2. Coagulant aid or flocculant chemical addition to primary coagulant use  | 2                             |
| 3. Flocculation  | 2                             |
| 4. Filter aid: addition of non-ionic or anionic polymers   | 2                             |
| J. Clarification/Sedimentation   |                               |
| 1. Sedimentation with plain, tube, or plate  | 4                             |
| 2. Contact adsorption  | 6                             |
| 3. Other clarification processes such as air flotation or ballasted clarification  | 6                             |
| 4. Upflow clarification  | 8                             |
| K. Filtration  |                               |
| 1. Granular media filtration for surface water or groundwater under the direct influence of surface water $\leq 3$ gpm/sq ft   | 10                            |
| 2. Granular media filtration for surface water or groundwater under the direct influence of surface water $> 3$ gpm/sq ft  | 20                            |
| 3. Groundwater filtration  | 6                             |
| 4. Membrane filtration   |                               |
| a. For compliance with a primary regulation  | 10                            |
| b. For compliance with a secondary regulation  | 6                             |
| 5. Diatomaceous earth as pre-coat filtration   | 10                            |
| 6. Cartridge or bag  | 5                             |
| 7. Pre-filtration staged cartridges or pressure sand without coagulation   | 1 per stage to a maximum of 3 |
| 8. Slow sand   | 5                             |
| L. Other Treatment Processes   |                               |
| 1. Aeration  | 3                             |
| 2. Air stripping, including diffused air, packed tower aeration  | 5                             |
| 3. Ion-exchange/softening  | 5                             |
| 4. Greensand filtration  | 10                            |
| 5. Lime-soda ash softening which includes chemical addition, mixing, flocculation, clarification or filtration, provided that points shall not be added for these processes separately | 20                            |
| 6. Granular activated carbon filter, provided that points shall not be added when included as a bed layer in another filter  | 5                             |
| 7. Powdered activated carbon   | 2                             |
| 8. Blending sources with significantly different water quality   |                               |
| a. To achieve MCL compliance   | 4                             |
| b. For aesthetic reasons   | 2                             |
| 9. Reservoir management employing chemical addition  | 2                             |
| 10. Electrodialysis  | 15                            |
| 11. Other - as determined pursuant to Env-Dw 502.11  |                               |

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|  |   |
|--|---|
| M. Residuals Disposal  |   |
| 1. Discharge to sewer or equivalent  | 0 |
| 2. On-site disposal, land application  | 1 |
| 3. Discharge to lagoon/drying bed, with no recovery/recycling  | 1 |
| 4. Backwash recovery or recycling to discharge to basin or lagoon and then to source                                   | 2 |
| 5. Backwash recovery or recycling to discharge to basin or lagoon and then to plant intake                             | 3 |
| N. Facility Characteristics  |   |
| 1. Instrumentation - use of Supervisory Control and Data Acquisition (SCADA) or similar instrumentation to obtain data |   |
| a. Monitoring or alarm only with no process operation if the plan has no automated shutdown capability                 | 0 |
| b. Limited process operation with remote shutdown capability   | 1 |
| c. Moderate process operation with alarms and shutdown and plus partial remote operation of plant                      | 2 |
| d. Extensive or total process operation with alarms and shutdown and full remote operation of plant possible           | 4 |

Source. (See Revision Note at part heading for Env-Dw 502)  
#9410, eff 3-12-09

### Env-Dw 502.11 Unspecified Treatment Processes.

(a) The department shall assign points to treatment processes not specified in Table 502-2 in accordance with this section.

(b) Any person wishing to add points to a treatment system for a process not specified in Table 502-2 shall provide the following information to the department in writing:

- (1) The name, mailing address, and daytime telephone number of the person making the request and, if available, the person's e-mail address;
- (2) If the requestor is other than an individual, the name and daytime telephone number of an individual representing the requestor for purposes of the request and, if available, the individual's e-mail address;
- (3) The name and physical address of the plant at which the treatment process for which points are sought is being used or is proposed to be used;
- (4) An explanation of the treatment process in sufficient detail to allow the department to make an independent assessment of the complexity of the process; and
- (5) The number of points sought for the treatment process.

(c) The number of points assigned by the department shall be directly proportional to the complexity of process operations and degree of skill required for its successful operation.

Source. (See Revision Note at part heading for Env-Dw 502)  
#9410, eff 3-12-09

### Env-Dw 502.12 Classification of Water Treatment Systems.

(a) Treatment systems shall be classified into 5 grades based on the complexity of the treatment processes at the system, ranging from grade I-A, the least complex, to grade IV, the most complex.

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(b) Treatment system grade shall be determined by summing the points of the treatment processes as assigned under Env-Dw 502.10 and then using Table 502-3, below:

Table 502-3  
Grades of Water Treatment Plant Complexity

| Grade     | Point Total | Other Limitations  |
|-----------|-------------|--|
| Grade I-A | < 16        | CWS serving <500 people or having < 200 service connections, without fire protection |
| Grade I-A | < 16        | NTNC without fire protection   |
| Grade I   | 0-30        | Excluding I-A systems  |
| Grade II  | 31-55       | None   |
| Grade III | 56-75       | None   |
| Grade IV  | ≥76         | None   |

(c) For purposes of certification, a groundwater source with no treatment whatsoever shall be considered to be a distribution system and not a treatment plant.

(d) Where there are multiple treatment facilities in different locations for a single water system, each location or facility shall be graded independently and the highest grade shall be the classification for the overall system.

(e) Each treatment process shall have points assigned only once.

Source. (See Revision Note at part heading for Env-Dw 502)  
#9410, eff 3-12-09 (formerly Env-Ws 367.09)

### Env-Dw 502.13 Adjustments to Treatment Plant Classification.

(a) The department shall adjust the classification of a treatment plant if the complexity of plant operations and degree of skill required for its successful operation are not accurately reflected by the point system, as follows:

- (1) If the plant is more complex or if a higher degree of skill is required for successful operation, the department shall increase the plant classification by one grade, subject to the limitation that grade IV is the highest grade; and
- (2) If the plant is less complex or if a lower degree of skill is required for successful operation, the department shall decrease the plant classification by one grade, subject to the limitation that grade I-A is the lowest grade.

(b) The determination to raise or lower the classification of a plant shall be based on inconsistency with other similar plants and public health and safety concerns.

Source. (See Revision Note at part heading for Env-Dw 502)  
#9410, eff 3-12-09

Env-Dw 502.14 Classification of Water Distribution Systems. Water distribution systems shall be classified into 5 grades based on the population served, as specified in Table 502-4, below:

Table 502-4  
Grades of Water Distribution System Complexity

| Grade     | Population Served (# people unless otherwise noted) | Other Limitations            |
|-----------|---|------------------------------|
| Grade I-A | < 500 or < 200 service connections                  | CWS without fire protection  |
| Grade I-A | Any number  | NTNC without fire protection |
| Grade I   | ≤ 1,500   | Excluding I-A systems        |
| Grade II  | 1,501 – 15,000                                      | None                         |

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|           |                 |      |
|-----------|-----------------|------|
| Grade III | 15,001 - 50,000 | None |
| Grade IV  | ≥ 50,001        | None |

Source. (See Revision Note at part heading for Env-Dw 502)  
#9410, eff 3-12-09 (formerly Env-Ws 367.10)

## Env-Dw 502.15 Adjustments to Distribution System Classification.

(a) The department shall adjust the classification of a distribution system if the complexity of the distribution system and the degree of skill required for its successful operation are not accurately reflected by the population served and other criteria, as follows:

(1) If the system is more complex or if a higher degree of skill is required for successful operation, the department shall increase the system classification by one grade, subject to the limitation that grade IV is the highest grade; and

(2) If the system is less complex or if a lower degree of skill is required for successful operation, the department shall decrease the system classification by one grade, subject to the limitation that grade I-A is the lowest grade.

(b) The determination to raise or lower the classification of a distribution system shall be based on inconsistency with other similar distribution systems and public health and safety concerns.

Source. (See Revision Note at part heading for Env-Dw 502)  
#9410, eff 3-12-09

## Env-Dw 502.16 Grades of Operators.

(a) There shall be 5 grades of operators to parallel the classification of treatment and distribution systems described in Env-Dw 502.12 and Env-Dw 502.14.

(b) An operator may operate a treatment plant or distribution system of the same grade or lower than the operator's certified grade.

Source. (See Revision Note at part heading for Env-Dw 502)  
#9410, eff 3-12-09 (formerly Env-Ws 367.11)

## Env-Dw 502.17 Operator Qualifications. To qualify to take the examination, the applicant shall:

(a) Be in a physical condition which enables an operator to satisfactorily perform his or her intended duties relative to the size and complexity of a water treatment plant or distribution system typical of those of the grade for which the applicant is applying;

(b) Be able to read and write in the English language; and

(c) Submit evidence of the minimum number of years of education and experience for the desired operator grade, as specified in Env-Dw 502.18 and Env-Dw 502.19.

Source. (See Revision Note at part heading for Env-Dw 502)  
#9410, eff 3-12-09 (formerly Env-Ws 367.12)

## Env-Dw 502.18 Minimum Education and Experience Requirements for Operators.

(a) Subject to (b), below, an operator shall have at least:

(1) For a grade 1-A certificate, a high school diploma or general equivalency diploma (GED) and either 6 months of operator experience or completion of the "Small System Operation" course as specified in Env-Dw 502.08(c)(3);

(2) For a grade I certificate, a high school diploma or GED and one year of operator experience;

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- (3) For a grade II certificate, a high school diploma or GED and 3 years operator experience;
- (4) For a grade III certificate, a high school diploma or GED, 2 years of post-secondary education as specified in Env-Dw 502.19, and 4 years operator experience; and
- (5) For a grade IV certificate, a high school diploma or GED, 4 years of post-secondary education as specified in Env-Dw 502.19, and 6 years operator experience.

(b) At least 50 percent of experience requirements shall be actual operating experience in a plant or system classified at no more than one grade below the grade for which the applicant is applying.

Source. (See Revision Note at part heading for Env-Dw 502)  
#9410, eff 3-12-09

### Env-Dw 502.19 Education; Substitutions for Education or Experience.

(a) Subject to (c) and (d), below, post-secondary education shall:

- (1) Be obtained at any public or private school that is accredited by the state in which the school is located to offer education beyond the high school level, including but not limited to an accredited college, university, community college, or technical institute; and
- (2) Have a concentration in environmental engineering, civil engineering, environmental sciences or related fields.

(b) For post-secondary education, 30 semester hours shall be equivalent to 45 quarter hours which shall be equivalent to one year.

(c) Continuing education units (CEU), including but not limited to specialized operator training courses, seminars, and related college courses, may be used to satisfy post-secondary education requirements.

(d) For CEUs identified in (c), above:

- (1) 10 classroom hours of courses as specified in Env-Dw 502.08(c), (d), and (e) shall be equivalent to one CEU; and
- (2) 45 CEUs shall be equivalent to one year of post-secondary education.

(e) The department shall substitute experience for the educational requirement for an applicant for a Grade I-A operator certification if:

- (1) The applicant's examination score exceeds 80%; and
- (2) The applicant's intended employer agrees with the substitution based on the duties of the position being compatible with the applicant's demonstrated level of training, knowledge, and experience.

(f) Upon request of an applicant, 1.5 years of responsible charge experience at the operator level may be substituted for one year of post-secondary education, to a maximum of one year credit for grade III and 2 years credit for grade IV.

(g) An additional 5 years of responsible charge experience may be substituted for the remaining post-secondary education requirement for grade III and grade IV, provided:

- (1) The experience is at a treatment plant or distribution system classified at the level of certification applied for; and
- (2) The applicant's supervisor certifies the experience.

(h) One year of post-secondary education may be substituted for one year of operator experience, not to exceed 50 percent of the experience requirement.

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(i) Education, training, or experience used in substitution shall not be used to meet any other education or experience requirements.

Source. (See Revision Note at part heading for Env-Dw 502)  
#9410, eff 3-12-09

### Env-Dw 502.20 Operator-in-Training (OIT).

(a) An applicant may become an operator-in-training (OIT) at a grade I, grade II, or grade III certification without having the experience required by Env-Dw 502.19 only in accordance with this section.

(b) The department shall allow an applicant for grade I OIT status to take the grade I examination without proof of prior experience.

(c) The department shall allow an applicant for grade II OIT status or grade III OIT status to take the corresponding examination if the applicant submits to the department evidence of education or experience in technical fields other than water treatment or distribution, as follows:

(1) For grade II OIT, one year of experience shall be required; and

(2) For grade III OIT, 2 years of experience shall be required.

(d) The department shall designate the applicant as an OIT upon the applicant's passing the examination.

(e) Upon the applicant's submitting evidence that the applicant has completed the experience as specified in Env-Dw 502.18, the department shall:

(1) Terminate the applicant's designation as an OIT; and

(2) Issue a certificate in accordance with Env-Dw 502.06(a).

Source. (See Revision Note at part heading for Env-Dw 502)  
#9410, eff 3-12-09 (formerly Env-Ws 367.13)

### Env-Dw 502.21 Responsibilities of Water System Owners.

(a) The owner of a CWS or NTNC shall:

(1) Comply with RSA 485 and Env-Ws 300 or successor rules in subtitle Env-Dw;

(2) Designate a certified operator as the primary water system operator, to be responsible for the duties as specified in Env-Dw 502.22;

(3) Have a certified operator available whenever the system is in operation;

(4) Ensure that any operating personnel making process control decisions about water quality or quantity is a certified operator;

(5) Notify the department in writing within 10 days of a change in the designated primary operator; and

(6) Ensure that any persons performing maintenance or construction work on the water system or system components have the applicable licenses or certifications.

(b) The owner of a Grade I-A water system shall not be required to delegate the operational duties specified in Env-Dw 502.22(a)(7), (8), and (9) to a certified operator.

(c) The water system owner shall make the designation required by (a)(2), above, in writing and submit a copy to the department.

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(d) The owner of a privately owned redistribution system shall comply with the requirements of (a)(2)-(6) and (c), above.

Source. (See Revision Note at part heading for Env-Dw 502) #9410, eff 3-12-09 (formerly Env-Ws 367.14); amd by #9659, eff 2-24-10

### Env-Dw 502.22 Operational Duties of a Primary Water System Operator.

(a) The primary water system operator designated pursuant to Env-Dw 502.21(a)(2) shall:

- (1) Conduct routine inspections of the water system in accordance with Env-Ws 360.13 or successor rules in subtitle Env-Dw;
- (2) Oversee operation and maintenance to maintain the safety and reliability of water service by ensuring that repairs and improvements are performed properly and in a timely manner, or, in the alternative, notifying the owner in writing of the need for such repairs and improvements;
- (3) Be knowledgeable in all operational aspects of the water system;
- (4) Have supervisory authority, including supervision of operating personnel, where applicable;
- (5) Oversee all chemical monitoring, bacterial monitoring, and other monitoring required pursuant to Env-Ws 300 or successor rules in subtitle Env-Dw;
- (6) Attend any sanitary surveys conducted by state personnel;
- (7) Oversee wellhead protection, watershed protection, and other activities associated with chemical monitoring waivers or as otherwise required by Env-Dw 301;
- (8) Conduct all reporting necessary in order for the water system to comply with the requirements of Env-Ws 300 or successor rules in subtitle Env-Dw; and
- (9) Keep complete and accurate water system records as required by Env-Ws 304 or successor rules in subtitle Env-Dw.

(b) The primary water system operator shall communicate any regulatory non-compliance issues to the owner of the water system and, if the owner has designated a manager for the water system, to the manager.

(c) The primary water system operator may designate any duties specified in (a), above, to other individuals as allowed by the water system owner or manager, provided that the responsibility for execution of these duties remains with the primary water system operator.

Source. (See Revision Note at part heading for Env-Dw 502) #9410, eff 3-12-09

## APPENDIX

| Rule Section(s)  | State Statute(s) Implemented |
|------------------|------------------------------|
| Env-Dw 502       | RSA 332-E                    |
| Env-Dw 502.21(d) | RSA 332-E; RSA 485:41, IX(b) |